

Abstract

A fuel-injection system for the direct injection of fuel into a combustion chamber (38), through a combustion-chamber top (39) arranged opposite a piston (40), has a fuel injector (1) which includes an actuable valve-closure member (4). The valve-closure member (4) cooperates with a valve-seat surface (6) to form a sealing seat. A multitude of spray-discharge orifices (7) generates a spray cloud (42), each spray-discharge orifice (7) generating a fuel jet (41), and the multitude of fuel jets (41) generating the spray cloud (42) in the combustion chamber (38). A first opening angle (a_1) of the spray cloud (42) in a first plane (e_1) is greater than a second opening angle (a_2) in a second plane (e_2) extending perpendicular to the first plane (e_1).
15 (Figure 2, Figure 3, and Figure 4)